

ILLINOIS



MAMMALS

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VIRGINIA S. EIFERT



ILLINOIS STATE MUSEUM



STORY OF ILLINOIS
NO. 2

STORY OF ILLINOIS SERIES

- No. 1 Story of Illinois: Indian and Pioneer, by V. S. Eifert
- No. 2 Mammals of Illinois Today and Yesterday, by V. S. Eifert
- No. 3 Exploring for Mushrooms, by V. S. Eifert
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STORY OF ILLINOIS SERIES, NO. 2

Illinois Mammals

Today and Yesterday

by
VIRGINIA S. EIFERT



SPRINGFIELD, ILLINOIS

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THE ANIMALS IN THE MUSEUM

"Is that little deer stuffed?" a small boy asked as he looked at the Museum's fawn.

To the lad, the means of preserving dead animals was to "stuff" them with something, but this method, once common, has largely been replaced by mounting. Museum methods use many materials to produce the appearance of life which now is essential in a mounted specimen. It is no longer a dead animal held back forcibly from decay; it is an animal brought skillfully to the alert appearance of life.

The usual method is to remove the skin and tan it carefully; the body is put into wet plaster which hardens to make a mold. Or else the flesh is removed from the bones and clay is built up around the articulated skeleton to take the place of flesh and muscles, and this form is cast in a mold. Inside the mold the preparator now packs wet paper and other materials until a complete shell of the animal is produced in papier mache. When dry, this is light in weight and retains the exact form and attitude of the living animal. Over this the tanned skin is painstakingly fitted, life-like eyes of glass are set in, eyes suitable for each kind of animal, perhaps whiskers are added, and the animal is ready to be placed on exhibition. It is so light in weight that it may be lifted with one hand. And it looks alive.

The purpose is not to fool the public, but to present as closely as possible the appearance of living things; for the Museum is not a storehouse of the dead, but an illustrated, three-dimension picture book of life.



THE STORY OF THE OPOSSUM

(*Didelphis virginiana*)

Long ago when the world was younger, there were certain animals called marsupials whose young were born very tiny and lived for a while in a skin pouch on the mother's body, just as baby kangaroos do today. As the ages passed, most of the marsupials vanished, yet some still live in the isolated continent of Australia and New Zealand, a few in South and Central America, and one in North America. This is the grey opossum of the American woods.

The opossum's brain has always been slow; it does not react very quickly to emergencies. When frightened or in danger, the opossum falls over in a faint and, with teeth bared, lies in a state much resembling death. This has been called, sneeringly, "playing 'possum", meaning a state of pretended catalepsy. But now it is known that the opossum is highly nervous, and the shock of fright causes this state of fainting in which the body reactions and functions are slowed. But although the possum may have a bad state of nerves, it can emerge from its illness with surprising speed and escape to safer quarters.

An opossum eats a number of varied things, from eggs and small chicks to beetles and dead-ripe persimmons, and when other food is scarce it may become a scavenger. The opossum hunches itself by the road where a chicken or animal has met death and, with green eyes glowing weirdly, pulls at the shreds of flesh.

A naked, pinkish-grey prehensile tail enables the opossum to climb easily about the trees, much as a monkey does. The feet with their grasping toes are strong and have opposable thumbs which leave unmistakable tracks in the mud. This then, is the opossum, a creature which has maintained its place in the world for millions of years without change, for opossums a million years ago were virtually identical with those of today.



THE MOLE

(*Scalopus aquaticus*)

A ridge of earth pushes up across the green lawn. Someone shouts, "There's that mole again!" and stamps on the soft earth. Instantly the burrowing ceases: somewhere underground a frightened, soft grey animal hurriedly turns around and scuttles back along the burrow. There the creature pauses in black darkness and sniffs, as the keen whiskers or vibrissae sense the presence of an earthworm which wriggles from the wall of the newly made burrow. The mole snaps at and seizes the worm, pulls, braces itself and pulls harder, until the worm, with a sudden letting go, pops out of the earth and is eaten. Still the earth trembles with the stamping of big human feet and the mole hurries on its way along the tunnel to the nest beneath a tree. Here in a safe, protected chamber the mole waits in the darkness until peace once more descends upon this small section of the earth.

Not until rather recently was the nest of a mole ever discovered, for it is well hidden under a tree or stump. The little moles stay here until they are almost grown. Then, like their parents, they thrust their long snouts into the soft earth and with their flipper-like, strong-clawed feet they push, with a sort of swimmer's breast-stroke, through the soil in search of worms and insects. Moles are insect eaters, not vegetarians, and their tunnels into gardens are not for the purpose of eating bulbs or grass roots. Damage, however, often results from the mole's visits, and these are due to two factors. One is the fact that the meadow mice often come into the convenient burrows of the moles and nibble tulip and lily bulbs: the other is the undeniable fact that when air conveyed along the mole's tunnel reaches grass roots, the grass dies. The mole itself is a harmless, silent, furry grey creature which is seldom seen outside its tunnels in the earth.



THE SHREW

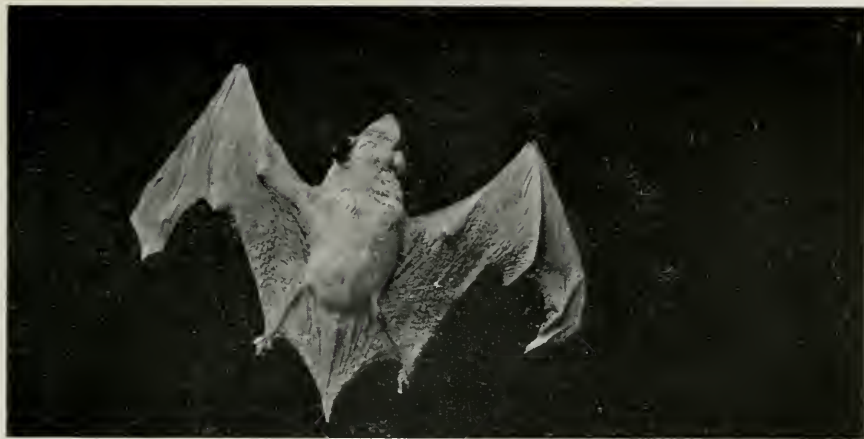
(*Cryptotis parva*)

On a cold winter day there are many tracks in the fresh snow. There are the hoppings of rabbits, the neat marks of squirrels, the embroidery of junco tracks, and the punch work made by skipping wood mice. And there are certain other tiny tracks made with purpose and determination. They are small and move in an even pattern over the snow. They are shrew tracks. Even and relentless, they move far off across the snow, around trees, as if in pursuit of something which they would reach eventually without undue worry or hurry. Here is the hunting path of the shrew.

It is smallest of American mammals, smaller than a mouse, with a short tail, long snout and miniature paws, a grey-furred, lively mite. At night the tiny beast sniffs the wind to catch the warm scent of deer mouse or sleeping bird, and then starts over the snow, not aimlessly, but with the silent desperation of hunger.

The shrew is almost always hungry. It has such a highly strung nervous system and high rate of metabolism that it may die of fright or of simply going hungry for twenty-four hours. Throughout the year the shrew eats many kinds of food—predominantly insects and snails and young mice or young birds, even small fish. It will devour the bodies of mice which are killed in traps and will eat all the young mice in a nest.

No wonder the hunting path is so deadly and unerring in its purpose. The shrew, smallest of mammals, has an urgent need for food and a relentless urge to kill which is all out of proportion to the diminutive size of its body.



LITTLE BROWN BAT

(*Myotis lucifugus*)

Over the pond and through the half light of early evening, the bats flutter on swift, unerring wings. There are tiny sounds of small teeth snapping on insects, the faint squeaks which are bat-talk. Up and around and away in the night, the bats are hunting for mosquitoes and other flying insects. Bats are so highly skilled at insect catching that scarcely any insect escapes the pursuit.

A bat is a flying mammal whose young—tiny furry packets of life—cling to the mother as she flies about at night. When they are half grown and have become a heavy load, sometimes she “parks” them on a tree trunk while she hunts.

At night the bat is only a dark flitting thing, imbued with the quality of mystery, witches, and superstition which has surrounded it for ages. For centuries it was looked upon as the devil's own ugly child. But close at hand, in daylight, the bat becomes an interesting little animal. The mouse-like body is covered with soft brown fur, and the wings are thin skin stretched across the wingbones, which are like the elongated fingers of a hand. The head has big round or pointed ears of great sensitivity; the snout is short, the mouth large and full of tiny sharp teeth. The eyes are keen, bright, little black beads, for a bat is not blind. Yet it does not depend upon eyes to take it safely through the night. The bat is a wonderful mechanism of highly delicate vibration reception. It can fly unerringly through tree twigs and interlacing wires and obstructions without touching one. This radar-like ability to detect obstacles before they are touched is the secret of that apparently aimless flight at night when, mysteriously, bats fly about and pick insects out of the darkness.



THE RACCOON

(*Procyon lotor*)

When dusk comes to the woods, the raccoon starts out on a hunt for food. A fish or a frog from the pond, insects from an old log, a passing beetle, a dead bird, or sweet corn from the field—the raccoon eats almost anything it finds. Raccoons are highly important in Illinois as fur-bearing animals; they are common in woods, where the young live in hollow trees until old enough to go out hunting for themselves. Raccoons are nocturnal animals which are not often seen, but the maze of footprints in soft mud along most of the watercourses of Illinois is proof of their abundance.



THE WEASEL

(*Mustela frenata*)

The slim little brown creature lifted one paw and with bright, curious eyes watched the children playing on the other bank of the creek. The weasel was motionless except for the glinting of its eyes. The lithe body was poised in the silent, effortless grace of the very wild. It was there for no other reason than curiosity, watched what the children were doing, was unafraid. Then, still without making a sound, the weasel put down its small paw and with an undulating motion of the slender body and long tail, ran off into the woods.

This was the weasel in one of its milder moments, for normally it is not a peaceful creature. It is a killer, and ounce for ounce, is one of the fiercest animals in America. The weasel is carnivorous, but beyond the natural kill of food which is needed to sustain the slim body are the birds, mice, chipmunks, chickens, or other creatures which the weasel slays just because it likes the taste of hot blood and the tang of terrible fear which the victims know just before death strikes. Even though the weasel is unpopular because of deeds which, to the eye of man, seem evil, it is a successful animal in the ability to live well and according to the manner of its kind.

In summer the weasel is dark brown with long, glistening outer hairs, and is white below. The tail is long and furry, with black near the tip. The northern weasels in the land of snow turn white in winter, all but the black tail-tip, but Illinois weasels usually turn a lighter brown. Winter and summer it roams the woods for food.



THE MINK

(*Mustela vison*)

The mink caught the sudden flick of great wings overhead, and quicker even than the owl that had dropped to clutch it, the mink dived without a splash into the stream. The owl hovered for a moment or two, then swooped upward again and was gone. Meanwhile, the mink swam downstream, came up for breath and then went down again, and came out on the shore far away from the spot where it had dived. The dark brown fur looked black from the wetting, though the water slid off quickly from the close, silky hairs. The mink shook itself, stood up suddenly on its hind legs to look about, then darted into the woods. The hunted now was hunter, the role the mink more frequently takes.

The mink is a hunter in most of its waking moments; it sleeps only when it is too tired to continue hunting. Then, wherever it is, it curls up and sleeps a while. The mink will catch a fish, stalk a frog, catch a rabbit, follow a meadow mouse, streak up a tree to rob a bird's nest, or take a chicken neatly out of a farmer's pens. With short legs and long supple body, the mink maintains such speed that few pursuers can catch it and hardly any of the pursued escape.

In Illinois the mink is most popular of all fur-bearers and is second in importance only to the muskrat. Each year the proceeds from mink pelts bring half a million dollars to the farmers and trappers of Illinois.



THE SKUNK

(*Mephitis mephitis*)

The skunk stepped proudly and a little pompously down the woodland path. The black and white tail blew a little in the spring breeze, the beady black eyes roved over the ground. It was spring, and the skunk was hungry. A shiny brown beetle crawled across the path. The skunk paused, picked it up, cracked the shell and ate every scrap. Then the skunk went on, while the new flowers of the wild crab apple trees sent perfume into the air, and a phoebe caught mosquitoes over the trail.

Usually the skunk is mild-mannered and unaggressive if it is left alone. When someone approaches down the path, the skunk will turn off into the bushes. A mother skunk and her young, however, have the right of way and there are few creatures, human or otherwise, who will dispute the path with her.

When threatened, the skunk pauses in dignity in the path. There is a sudden lowering of the head, patting of the forepaws on the ground, and a sudden turn-about as the plummy tail rises and a horrible scent engulfs that portion of the woods and all who happen to be in the way. The odor which the skunk throws from a scent gland under the tail is vile and choking, penetrates hair and clothing, and leaves a recollection which is hard to obliterate.

This is not the skunk's only means of protection. It is a good fighter with teeth and claws when occasion demands. The skunk, however, is known by the silent punishment of its scent and is forever marked as the Animal with the Smell.



THE FOXES

(*Vulpes fulva*)

Long ago an old log fell over on the slope above the pasture. Now there is a dark spot beneath it—a hole. A yellow-brown area on top of the log, a flick of motion, and suddenly into focus comes a fox with chin on paws, watching. On the packed clay by the hole three young foxes are sleeping. It is a placid, sun-warmed scene, quiet with that mid-afternoon hush which even silences the catbird in the thicket and sends a sleepy drone from bumblebees in the clover.

There is a flash of brown in the weeds as a sleek body slips into the pawpaw thicket. There is a short, sharp bark and, at the sound, the fox on the log stands up. The little cubs scramble to their feet, wobble, topple over, snap and snarl in mock ferocity; each tries to be the first to reach the vixen as she comes to the den and drops a bird for them to fight over. The feathers fly.

Fox families like this one are becoming more common in Illinois. Under the very noses of men, the foxes hunt and rear their young, year after year, and instead of falling beneath man's oppression, they have become more keen, more alert, more "foxy" in eluding the dangers which civilization has put in their path, perhaps more so than the old-time foxes of the wilderness.

The red fox, pictured here, is the more common of the two foxes found in Illinois. The other, the grey fox, is a little larger and not so common.



BOBCAT

(*Lynx rufus*)

It was dusk in the great swamp. The chuck-will's-widow called, and the mosquitoes made an undertone of humming which filled the forest. The swamp glimmered silkenly where the angular cypresses and tupelos stood tall and black. The noises rose and fell—the groaning and clicking of frogs, the squawk of a night heron, the querulous cry of a raccoon, the far-off bark of an owl, a sudden crashing in the underbrush. And then there came that call. It was a wild scream, a coughing cry, so fierce, so untamed, that even the chuck-will's-widow ceased on a half note, and momentarily there was pulsating silence as the creatures paused, quivering, and listened. The bobcat was at its hunting.

Somewhere among the canes there crouched a brown, furry animal, a short-tailed cat three feet long. It came on huge soft feet through the devious paths of the cane into the more open places of the forest, through the ferns, sniffing, hunting. A wood mouse, nervously unable to be still, skipped over the path and the big cat pounced, caught it, worried it a while, ate it. Again came that heart-stopping wowl. It was the sound of the almost forgotten primeval wilderness which still lived in the swamp.

The bobcat is still to be found sometimes in Illinois, but although it is not too much disturbed by civilization, it still prefers the deep swamps and forests. It lives in southern Illinois where the hills are high and the cypress swamps remote, and occasionally in river forests throughout the state. Because the bobcat is so secretive and seldom comes out in daylight, it often may go unsuspected. During the day it sleeps in a hollow tree or on a ledge of rock and comes out for its hunting in the pleasant hours of dusk.



THE WOODCHUCK OR GROUND HOG

(*Marmota monax*)

A woodchuck, rich brown fur glistening in the sun, furry tail lolloping behind, runs along a country road. Here is one of the largest of Illinois rodents, a wild creature which has adapted its wildness to the nearness of men. It is constantly on the alert, whether running or sitting upright to view the scene; for the farmer, considering the woodchuck a pest, is always ready to exterminate it.

The woodchuck is heavy-set and furry and appears larger than it really is, with sleek head and close-held ears, and big incisor teeth which, as in all rodents, mark the woodchuck a gnawer. The front feet have strong claws for digging because the woodchuck lives in deep underground burrows which are dug with plenty of extra entrances and exits. Here in spring the young are born, and by late summer there are plenty of half-grown young 'chucks out in the fields nibbling clover with their parents.

In midsummer, woodchucks appear to aestivate. This is a summer form of hibernation which slows the living processes as the animal slumbers in its burrow. By autumn, however, the woodchucks are again alert and after eating for many weeks, have grown very fat. As cool weather approaches and frost sparkles on the clover leaves, the woodchucks again become drowsy and slow. And so they go down into their underground tunnels for the last time in the year, curl into a ball, and so to sleep. Their slumber is so deep that it is almost like death. It is a slowing of pulse, heart-beat, and breathing, with body temperature in the forties. The woodchucks in their burrows are insensible to what is going on above ground until spring comes. Then they return to consciousness, blink and stretch, and come creeping out to hunt a good bite of young, succulent clover leaves.



THIRTEEN-LINED GROUND SQUIRREL

(*Citellus tridecemlineatus*)

In open country, in parks, roadsides, cemeteries, and on golf courses there lives the thirteen-lined ground squirrel. It is not a gopher, as it is often called, but is a true squirrel, a spermophile, which prefers to live in holes in the ground instead of in trees.

The thirteen-lined ground squirrel is a small, sand-colored, sleek-backed little squirrel with sparse tail, big eyes set rather high in its head, and thirteen stripes down the back. The stripes, unlike the five smooth, plain stripes down the chipmunk's back, are broken into little squares.

The ground squirrel, secure in the sunny grassland, perhaps is most often seen in open, mowed park land, golf courses, and most commonly of all in cemeteries. On the golf course, the ground squirrel's holes often conflict with the proper holes of the game; many a time a golf ball has rolled into a squirrel's burrow and cannot be retrieved. Meanwhile the owner of the burrow sits bolt upright like a tent picket, jerks an abbreviated tail, presses its forepaws against a heaving bosom, and utters a piercing, shrill whistle, a high-pitched barking which continues for many minutes.

Throughout the summer the ground squirrels run about through the grass, eat quantities of seeds, and, as winter approaches, they spend more and more time in their underground dens. As cool nights lay frost on the green things, the ground squirrels come out only briefly, and at last they go to sleep for the winter. Far underground, below the frost line, they lie curled up in a state approaching, yet not quite touching death, and there they stay and sleep until spring.



FRANKLIN'S GROUND SQUIRREL

(*Citellus franklinii*)

Ground squirrels are spermophiles, and spermophiles are seed-eaters; most of them live in the open places of this continent. The western states are full of them—the little antelope ground squirrels of the desert, the flicker-tails of the Dakota plains, the golden-mantled ground squirrels in the Rockies and the Sierras—spermophiles in rocks, grass, and among sage and cacti.

Ground squirrels seem to be in a constant state of fear and are streamlined as if for the quickest possible escape. They burrow in the ground, make their nests there, store food there, and find shelter underground from the snap of a coyote, the swoop of a hawk, the soft wing-beats of an owl. Spermophiles live in some of the grandest country in America. They know how the desert feels in a storm at midnight, how broad are the plains with a vast sky over them, how smug the mountains are, where in their hugeness even a spermophile may find a hole for shelter.

One of the spermophiles typical of the plains and the middle west as far east as Indiana, is the long, lean, grey Franklin's ground squirrel of the roadsides. It is about twice the size of the little thirteen-striped spermophile of the golf courses, and has a rather long, sparsely furred tail which streams behind when the squirrel decides on a dash across the road. Or, sometimes, the passerby along the prairie roadside may see a grey ground squirrel sitting upon its haunches, paws pressed to a white bosom, observing the cornfields and the sunshine, and keeping an eye on the hawk soaring over the next field.



THE CHIPMUNKS

(*Tamias striatus*)

Around tree trunks, over humpy roots, through the crackling dryness of autumn leaves, there goes the bustling sound of little feet. The chipmunks are working hard and the woods seem full of small, scampering, mysterious little noises. There goes another—and a plump brown chipmunk, tail upflung, cheeks stuffed with seeds, dashes off to a hole in the ground.

The chipmunk spends most of its time in a search for food, or in digging home burrows in rocky places or under tree roots. Down in one of these complicated underground hallways are sleeping dens and food-storage chambers. Hard basswood seeds are neatly halved and the meat eaten; hazel nuts are hastily monopolized and stored away; the sweet white oak acorns are often garnered, and so are the seeds of panic grass, wild plum, wild crab, and apple. Even mushrooms are eaten. And when a camper drops a prune seed along the trail, the first chipmunk on the scene hurriedly stuffs the prize into a cheek pocket and races off to dine in solitude. The debris of picnic spots is closely examined, and small edibles are carried away in furry chipmunk cheeks or prudently eaten on the spot.

The chipmunk probably feels safest on the ground, especially when one of the entrances to the home burrow is well within reach. However, in time of extreme danger when the hole is too far away, a chipmunk will run up a tree and from a perch of vantage will scold the intruder below. A chipmunk has a most surprising voice for one so small and apparently so meek. With wren-like violence, a loud, irritating complaint is shrilled from an angry chipmunk—perhaps one who has been annoyed at his work on a stone-hard prune seed.



FOX SQUIRREL AND GRAY SQUIRREL

(*Sciurus niger* and *Sciurus carolinensis*)

Gray squirrels and fox squirrels are residents of Illinois, but they are seldom found living together in the same woods. When that occurs, the gray squirrel probably has invaded the territory of the fox and has come out the victor in the inevitable arguments and fights which ensue. Both have very similar habits; both will take eggs from a bird's nest, both on occasion will devour young birds, both will hide quantities of nuts each autumn that are never found again. Squirrels—the rusty-brown fox squirrel, and the smaller, delicately colored gray squirrel—are very much at home on the ground, but they are essentially tree dwellers and run for a tree when danger approaches. Once in a treetop, the squirrel's technique varies from scolding in a loud voice, tossing nutshells or bits of bark on to the heads of passersby, or galloping at a great rate of speed through the treetops via the twig bridges which connect the trees of the woods.

In winter the squirrel, with tail curled over nose, likes to put in long hours of sleep in a big bulky nest of leaves in a tree, but the squirrels do not hibernate. Sometimes the leaves blow out and make cracks through which cold winds push, and then the squirrel hastily dashes out to bite off a mouthful of shingle oak leaves to patch the hole.



FLYING SQUIRREL

(*Glaucomys volans*)

Down from the maple tree at twilight a shadow flits and is gone into the soft darkness. There is no sound and no flutter of wings: simply, a shadow comes down and vanishes, and that is all. Evening after evening it happens during the cool springtime.

But one May morning there is a fussing and complaining and twitching in the maple tree where the old wren house hangs. The wrens are back and they are enormously indignant. Something has gnawed the opening of the wren box until it is big enough to admit a robin—if a robin ever would enter a wren house—and it is full of leaves and sticks.

Suddenly from the overly full nest a grey creature sails out into the morning sunshine, lands on a tree trunk and clings there. It is a flying squirrel, a large-eyed, gentle creature, grey-brown above and neatly white below, with flanges of furry skin which help the squirrel glide down—not fly—when it launches itself into the air. The flying squirrels have taken over the wren's nest, and there is nothing to do about it now except to let them stay, for inside the nest four soft baby flying squirrels are curled in the bits of fur and leaves. It has been the adult flying squirrels which at dusk sailed without a sound out of their tree and have gone unseen about their nightly hunt for food—for nuts, seeds, fruit, insects.

Flying squirrels often are more common than one may suspect, for the nocturnal habits put them in the category of things seldom seen. Many times they find their way into attics and in crannies under eaves, or even enter houses, where they make mysterious tapping and running noises which oftentimes upset the nervous or superstitious inhabitants of the house.



THE STORY OF THE BEAVERS

(*Castor canadensis*)

A long time ago in Illinois, beavers once lived their peaceful community lives. Then they became extinct in the state, for they could not withstand the approach of a civilization which for centuries has demanded beaver furs. It was the Hudson's Bay Company long ago which sent trappers into the unexplored continent to take beavers or barter with the Indians for the valuable pelts. The search for beaver opened America to later settlement, opened the Oregon country, the Great Lakes, the Canadian wilderness, and the Wisconsin, Michigan, upper Illinois, and Minnesota country.

By and by the remaining beavers were largely gone from their old haunts; those which remained lived in quieter, more remote wilderness places where they could have peace. Now with legislative protection the beaver in many places is becoming more abundant. It has been introduced into southern Illinois where it has been successful.

In spring a pair of young beavers finds a small pleasant stream and builds a strong dam across it to make a pond. They choose slender young aspens and cottonwoods and willows, and gnaw completely around the trunk as high as they can reach, until each tree falls. Then the branches are clipped off with those sharp orange incisor teeth, and the trunk is dragged to the stream and added to the dam. When it is finished, a quiet little pond forms back of it.

The beavers cut more trees to build a house. This is a great pile of sticks and mud and sod, all thatched and matted together, with rooms inside where the beavers rear their young and spend much of the winter weather.



DEER MOUSE

(*Peromyscus maniculatus*)

A wide-awake little animal of the winter woods is the deer mouse—small, plump, grey-brown above, with clean white feet and underparts and a long, agile tail. The eyes are black and large, the ears soft and pink, the whiskers long and expressive. Instead of preferring human habitation, as some mice do, the deer mouse puts a roof on a brown thrasher's old nest, fills the hollow inside with willow silk and plant fibers, and sometimes adds a few feathers or bits of sheep's wool that have tangled on the fences or bushes nearby. A small opening is made for a door on one side of the nest.

The deer mouse, however, is really an animal of the ground, and here it hunts for food. There are stores of food here and there for a hungry mouse. It knows where there are more of the tiny hard basswood seeds which it cracked and ate under a log last fall. It knows where there are hickory nuts which, hard as they are, can be gnawed and the kernels eaten. And on winter nights when the moon sends long shafts of white light over the ragged stalks in the nearby cornfield, the deer mouse leaves its nest and goes in long leaps to the field. Up a shrivelled cornstalk—on to a yellow nubbin—a long look around. Then the mouse sits on its white toes and gnaws away the bleached old husks and nibbles the hard, yellow kernels. The small sounds of gnawing are loud in the quiet winter night.

Next day there are footprints scattered over the snow; there are tooth marks on the left-over corn, and in the winter woods close by, a warm mouse is sleeping in a thrasher's remodelled nest.



MEADOW MOUSE

(*Microtus pennsylvanicus*)

Down in the grass on a summer afternoon there is a most surprising view of things. In the tangle of grass blades and old dead stalks and stems there are little lanes and runways. At first they might seem accidental—the mere natural growth of the grass, the whims of plants. But they are not aimless. Here is solid planning and engineering, for these are the roadways of the meadow mice.

Ever since the grass grew, the little brown mice, short-tailed and round-bodied, busily clipped off the grass in the sod. They made a little lane that was big enough for mice to travel comfortably back and forth about their business without having to venture out into an unprotected world full of hungry enemies. For long distances from the burrow and its nest, out in twistings and windings that lead far into the grasses or to the grain fields, these neatly cut and maintained roadways show where the wild mice, day and night, run about in privacy. No twig is allowed to obstruct a lane, for one day it may mean life or death when a mouse comes skipping in palpitating fright to safety. There are too many enemies of mice for them to neglect their one avenue of escape, but when a grass fire cleans off the meadow, all the network of lanes is exposed to view. The lanes are paved with mouse footprints, stamped down by tiny paws.

The meadow mice perhaps are one of the commonest of Illinois mammals, yet they are seldom seen because of the efficiency of those runways. Winter and summer, the brown mice are active in their constant hunt for seeds, grains, and beetles.



THE MUSKRATS

(*Ondatra zibethicus*)

Where the pond merged with the swamp, a hump of earth and sticks rose above the water, the muskrats' new winter house. As autumn moved toward winter, the brown furry animals put the finishing touches on the home which would shelter them during the long cold months. It looked very much like a beaver lodge but was smaller, a conical heap of sticks and mud perhaps four feet in diameter, plastered and matted together. Inside was a room, perhaps several rooms, and a sloping inner passage which went down into the water. This was the only exit and entrance.

At last there comes freezing weather. The muskrats stay in their house. When they are hungry, they slide down the sloping passageway into the water and here beneath the thickening sheet of ice they find the succulent white roots of calamus, cattail, and lotus just as they did all summer long when they had to dive from the surface to get them. The muskrats do not hibernate; they eat well and sleep warmly all winter, for here on the pond bottom lies all the abundance of summer; and in the house, protected by thick walls and fostered by the heat of their own bodies, there is an almost unvarying temperature.

When spring comes and the ice thaws, the muskrats come out of their mud house and once more swim about on the surface of the pond, slap their narrow, flat, rubbery tails gaily as they dive and dive again. Soon they dig a burrow up into a shelving bank of the pond, and here in this shelter high above water the nest is made and the young, several batches of them, are reared during the long summer. The muskrat is considered the most important furbearer in Illinois, its pelts equalling in value all others put together.



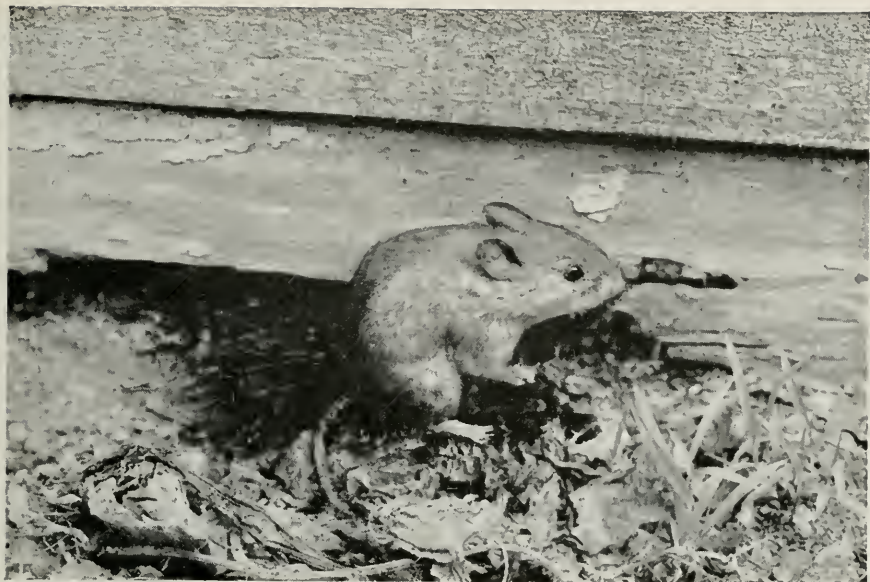
NORWAY RAT

(*Rattus norvegicus*)

Long ago there was a ship in a European harbor, and into it crept brown, sharp-faced, sly and secretive animals, up the mooring ropes, on to the deck when no one was watching, and down into the hold which was stacked high with chests of English tea and foodstuffs. No one knows on which ship it was, though it probably was around the year 1775, that the rats sailed away from European shores and landed in America. There had been no rats like these before on this continent.

Others followed, on all the other ships, though many did not land but sailed back and forth and lived their entire lives for generations on ship-board. The rats that landed ran into alleys and cellars and wharfside houses, and there they lived, they and their young, and the generations which followed them. By and by they spread all over the country. The Norway rat, for thousands of years the most disliked of all rodents, perhaps of all animals, adopted America and entered every city and farm in search of food and lodging. It lived in filth and carried disease. It was responsible for outbreaks of bubonic plague, because rat fleas are carriers of this disease. The presence of a rat in a house is like harboring a wild and dangerous animal: sometimes it is known to nibble the toes or fingers of sleeping babies, or bite adults, and the bites often become badly infected from the filth in the rat's mouth. Men had had good reason through the centuries to loathe all rats.

For it is ugly and coarse and fierce, without the dignity of a wild animal. In its dull eyes there is an expression so indicative of cold and calculating hate—perhaps the result of its being hated by so many generations of humankind—that a grown man, cornering a defiant rat, often will be the one ignominiously to retreat.



THE HOUSE MOUSE

(*Mus musculus*)

Through a crack that would scarcely admit a grasshopper, a little grey mouse slips neatly indoors and, as its ancestors have done, sets itself to the business of living with men. Few houses, even skyscrapers, never have had mice as boarders.

Very often they keep aloof and are little noticed for a time—just a shadow of a shape skittering behind the stove, the patter of tiny footsteps hurrying through the plastering, a nibbled place on the oatmeal box. But let them live in peace and they assume more than the rights of room-and-board. They grow bold. They run about in the kitchen at night even when the cook is getting supper; they peer out from the corners, bright eyes like black beads, whiskers a-twitch, watching for a crumb. And any food left outside a metal cupboard at night is sampled by morning. Then, if not before, the housewife buys a trap or two, and for a time rids her household of mice. But they will return.

So it has been since mankind lived in caves in southern Asia, ever since man stepped up, a little at a time, and bettered his living conditions. With him, everywhere he went, the mice went, too, and adapted themselves neatly to any situation in which man found himself. Many a mouse has been a friend to a lonely poet or artist, and at least one mouse was immortalized by one of the lonely artists and became an international personality. House mice have travelled around the world and back again. Some, it is said, are constantly on the go, they and their children. They may be born in England and die in America, and their descendants may go to China or Samoa or Siam. They travel on railroad trains and in camel trains, in airplanes and submarines. The lowly mouse, humble and shunned, since man's beginning shared its life with him, and doubtless will continue to do so whether he lives in skyscraper or cave.



THE RABBITS

(*Sylvilagus floridanus*)

In April there are young rabbits out in the world. Perhaps they were born in a grass-covered nest under the gooseberry bushes in the back garden, perhaps in a hollow under an old log in the woods. They are soft, fuzzy things, yet most of them survive and grow quickly to adulthood. Then when

the summer moon is full and bright, illuminates the deep shadows of the maples and puts an unreal brilliance over everything, rabbits old and young come out and skip gaily in strange dances. The moon gleams on white fluffy tails and picks out the soft coppery gleam of wide eyes. There is much flipping about of hind legs, a shaking of ears, a reckless nibbling of peas and cabbages in the nearest garden. Or a rabbit may sit upright with soft paws pressed close to a furry bosom, and, with a mystic expression, eye the moon.

The rabbit has no permanent home or shelter: when it rests, the rabbit sits in a clump of grass, works down into it until a cupped form is made, and sits there in confidence that it is well concealed. So toothsome a morsel for mink and weasel, hawk and owl, fox and dog, must know how to keep away from hungry mouths. It may conceal itself in full view of the enemy or take to its heels. It may be soft and helpless in appearance, but the rabbit manages generally to preserve its life and keep the rabbit world from decline.

In winter we really begin to see the extent of the rabbit population by the numbers of tracks they leave. After a night of winter moonlight, the snow in thicket and cornfield is so interlaced with lanes that the tracks themselves are blurred. Left-over corn in the field is chewed; fruit trees are gnawed for the sweet inner bark, and every available bit of food is gleaned by the hungry rabbits.

ANIMALS OF THE PAST

The story of the Illinois mammals goes back so far into the dim past that no man saw some of them. It is only known that they lived here because of the bones and fossils which remain in the earth far beneath the surface of town and field. Almost everywhere in Illinois are evidences of the past. In unexpectedly common places are remains of the populations of animals which lived and died and left only these remnants to tell of their presence.

The story goes back so far that no one can see it clearly. There were no mammals in those days; as the climax of the animal world, they came much later. Those earlier animals were invertebrates that swam in the oceans which once covered much of Illinois. Sea lilies, cuttlefish, snails, clams, and other marine creatures occupied the seas in such large numbers that when they died their limey bodies sank to the sea-bottom, stacked up and up, were pushed down by the weight of the water and time, and solidified as limestone. When the seas went away, the limestone beds stood up as great cliffs—those along the Illinois and Mississippi Rivers are some—and in them, turned to stone, are the shells and petrified bodies of those early creatures. They form the background for the animals which came much later.

When the vast forests of tree ferns grew in the hot swamps of Illinois and later laid down deep black beds of coal, other animals lived in the sunshine or in the stagnant waters. There were the ancestors of horseshoe crabs and cockroaches; there were dragonflies and spiders. And still there were no mammals on the earth, none in Illinois.

Ages passed, slowly, with the changes that come over great periods of time. Seas came and went. The coal beds sank and rocks rose up. Then came glaciers. They moved out of the north, slowly, for ages, changing the climate, sending warmth-loving creatures southward. By that time there were birds and mammals. While the ice stood hundreds of feet high over part of Illinois, there could be no animal life, but when the ice melted, leaving wet land and new greenery, there came mammals like none which are here today. Yet they were enough like certain modern animals to find in them something familiar and recognizable. These were forerunners of modern forms.

Herd of musk-oxen, like those that still roam here and there in Greenland, trotted over the green tundra and grazed on moss and grass. The musk-ox was something like a small bison, with low-slung head, long, shaggy coat, and horns that curved down close to the face and jutted out in formidable spikes. The shaggy little musk-oxen were well fitted to live in the cold climate of Illinois following the retreat of the last glacier. They could fight off the attacks of wolves that lived in the forests along the Sangamon.

Enormous beavers were here, too. They were almost three times the size of today's beavers, but probably they had many of the same habits. Perhaps as spring came on, the giant beavers, with their great orange incisor teeth, gnawed down cottonwoods and made great dams to hold back streams, and thus created ponds of still water. These beavers are known to have lived near Clear Lake in Sangamon county: a few years ago their bones were found far down in the gravel of the lake. There were ancient turtle remains there, too, and primitive types of fish. Deer lived in the region, and in those days they feared no man, because still there were no men in the Illinois country.

But there were elephants—the ancestors of modern elephants. Perhaps they trod heavily over the little hill where the state capitol now stands.

drank at the long-gone creek, trumpeted as elephants do, and moved on, and died, here and there. These were the mammoths. Their bones tell of this amazing past. Unexpectedly today, when a ditch or a well is dug, or when a sewer is put in far below ground, the diggers may strike something hard. Perhaps they stop work and go at it carefully; perhaps they find a huge yellowed ivory tusk, enormous leg bones, perhaps a skull so large that it hardly seems like one. This has happened here and there throughout Illinois. It is ample proof that once there were wild elephants different from any elephants today.

They went away, and so did the musk-oxen and the giant beavers. Other animals occupied the Illinois country, and at last there were men who moved in from other places, copper-skinned men who came in dugout canoes up the Mississippi from the south. They had their origin elsewhere, but for a long time they lived in Illinois, took enough of the animals for food and clothing to sustain the tribes, but did not exterminate any species. In those days there usually was enough for all.

Bison in enormous herds were here; they took the place of the little musk-oxen. There were wolves and foxes, and in the forest were elk or wapiti, the beautiful Virginia deer, and, sometimes in winter when the weather was severe in the north, there were moose. Black bears lived in the forests, and there were mountain lions in the canyons. And all the smaller animals lived here in great abundance; their natural enemies served to keep their numbers in check. Natural enemies prevented there being too many rabbits and not enough clover, prevented the predators from taking more than they needed for food.

White men came. The Indians and the big mammals went away. They did not belong in a land where there were cities, farms and highways, with vehicles that, as years went by, picked up greater and greater speed.

There still are animals in Illinois, but many of those that remain prefer to go about at night. It is safer then. The others, the big mammals which could not withstand the approach of civilization, are shown in the Illinois State Museum in large, natural, life groups which tell better than words and pictures something of the past, something of the lost heritage of Illinois.



THERE WERE MOOSE IN ILLINOIS

(*Alces americana*)

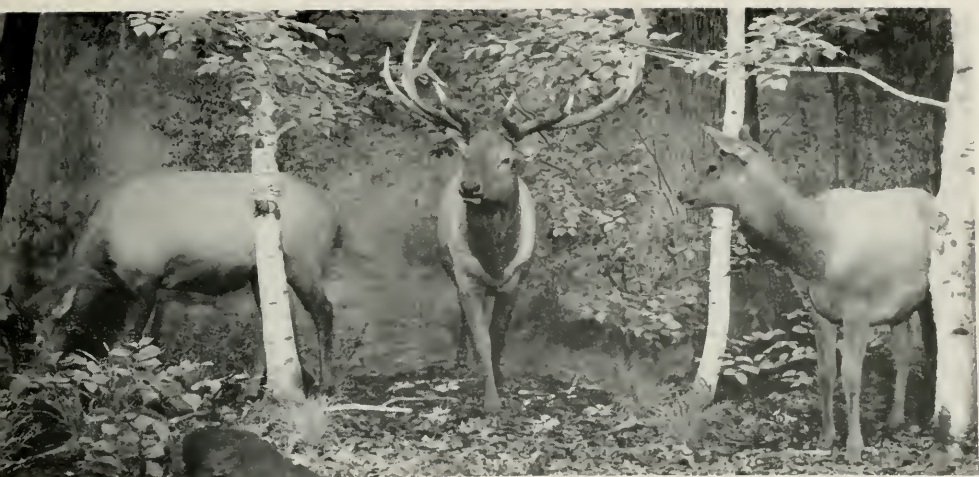
Knee deep in the cold lake, the sunset gilding the ripples that lapped its legs, the bull moose bent its short neck and submerged its great head to grasp a mouthful of water weeds. Behind were the dark spruces of the north country and the bright pink blossoms of fireweed under snowy birches. The white-throated sparrows piped in the blueberry bushes on the slope, and out over the water a loon called.

The moose lifted its dripping muzzle from the lake bottom, pricked forward its big ears, and then went tramping off with a splashing and tearing of underbrush, one of the last truly wild creatures in America.

Long ago when American animals first were seen by French and English explorers, whose knowledge of natural history was limited solely to their homeland and to the extent of their imaginations, many were named for European types. Men knew the bear, the deer, the squirrel and the rabbit, because they had these things at home, but when one day the French explorers were confronted with the long nose of a moose, a beast which stood taller than any deer, had high humped shoulders, and a face like nothing ever seen on land or sea, and flat curious antlers more like those of the extinct Irish elk than anything else, the French were plainly startled. They gestured and talked and tried to explain what this beast was, but nothing in their limited experiences could parallel it. So they called it L'Original, and Original the beast remained for many years.

The English didn't approve of the French name, so they took the name given the long-legged beast by the Indians which, adapted to English, became "moose". And the name, suitably enough, is typically American, not borrowed from some European animal.

The Museum group shown above depicts a pair of moose as they were years ago in Illinois in winter.



WAPITI, KING OF THE DEER

(*Cervus canadensis*)

The elk with its widely branched antlers was master of the forest in the days when the wapiti or elk were the king deer of Illinois. They were splendid tall beasts, yet big as they were, they could step silently; their yellow-brown coats blended with the forest, and when the elk were quiet, they were well hidden. It was strange that anything so large could be so well concealed. But when the bull lost its temper and lifted a mighty head, bugled the challenge call to other bull wapiti, and came thundering down the hill, head high, antlers crashing against the trees and looking as broad as tree boughs themselves, then the whole woodland became conscious of the wapiti and stayed out of the way.

The stag was owner of the herd and at all times kept careful watch that none of the cows or calves strayed away or became lost. Fretfully, the stragglers were nudged back into place and a wary eye was kept on rival bulls. It was a point of honor, not affection but love of power, which caused the bull to maintain the largest herd it could command, and only a superior rival after a fierce battle could take it away.

Yearly the huge antlers were shed and new ones grew. In spring they were covered with velvety skin distended with blood. At this time the stags grew touchy and irritable and took care not to scratch their painfully new antlers. But when the velvet dried, the bulls rubbed their antlers among the bushes and against trees, until the velvet fell away and the antlers were sharp and ready for a challenge.

There are no more wild wapiti or elk in Illinois—they were too big for civilization, though they still remain in a wild state in the Rockies. The Museum life-group of wapiti shows them as they used to be in Illinois forests.



WHITE-TAILED DEER

(*Odocoileus virginianus*)

For years there were white-tailed or Virginia deer in the Illinois country. They pricked the snow with sharp footprints and champed the spicy green sassafras twigs when other food was scarce. The deer lived with a spring in their heels and a wildness in their hearts, and in the audacity of their freedom they often sailed neatly over the farmer's fences into pioneer barn lots, or they fed with cows in the pastures.

In the early days when men had come to America to make a new nation, they found in the abundance of deer a source of food that was badly needed, and in deerskin a material for necessary clothing. Many a time these animals stood between men and starvation and freezing. To the deer men owed much, and still they did not too greatly decimate the numbers of deer. For centuries these animals were the most important on the continent.

Deer are now present in Illinois, 3000 strong in 1950, found principally in the north and south, but occasionally are reported in many other places. They like thickets and openings, with deep woods for shelter nearby. For deer, unlike the bison, have adapted themselves to civilization. This, plus sensible conservation laws on the part of mankind, has kept them in almost their original abundance in many states. In New England and other northern states they are still common and rather tame because they seem to know that, except for the short weeks of the legal hunting season, they are the pampered darlings of the forest. Even to protect his crops, a man may not shoot a deer out of season, and in some localities, when a dog barks at a wild deer, the dog's owner may be liable to a fine.

Deer are constantly wary, ever alert. Startled, they raise their heads, flutter their long ears, then with a whisk of a white tail, a sudden leaping on long slender legs—the deer are gone.



THE BISON IN ILLINOIS

(*Bison bison*)

The brown Sangamon moved past its willow-bound banks, past a kingfisher sitting on a stub, past trumpet vines tangled on the slopes. Up on the bluff the cottonwoods clattered their hard leaves in the hot summer wind, and far away there was a low mutter of sound, a rumble like thunder, though the sky was clear. The herd was coming. Bison—suddenly they were on the rim of the bluff. The kingfisher screamed and flew down river as, like a relentless stream of black lava, the herd poured on well-worn paths down to the water. The dust rose high; the hard hooves thundered on baked river mud; the river was roiled with plunging bodies that doused themselves and drank, and rolled in the dust and mud. Above the thunder rose the bleat of calves and spike-bulls; the river's edge was jammed.

All this happened long ago along the Sangamon, as it was happening over much of the country from the Great Plains to the shores of the Potomac and the Susquehanna. In those early days the bison numbered more than sixty million. The land was theirs.

The known story of the American bison or buffalo goes back to Montezuma's menagerie in Mexico City where Cortez, first of all white men, in 1521 saw the bison. "It is the greatest rarity," he said in awe, "the Mexican bull, a wonderful composition of divers animals. It has crooked shoulders, with a bunch on its back like a camel; its flanks dry; its tail large; and its neck covered with hair like a lion. It is cloven footed, its head armed like that of a bull, which it resembles in fierceness, with no less strength and agility."

There were few other reports until Marquette and Jolliet paddled up the Illinois river in 1673, and saw great herds of wild bison feeding on the Illinois prairie. In those days the bison were everywhere.

But the great beasts were doomed. The Indians always had killed them, but did not cut down the herds as the white men were doing, and so there were still a great many bison in Illinois until the latter part of the eighteenth century. But during that time there occurred at least two terrible winters. One came in 1768, the other ten years later. Of the winter of '78

it is known that the snow fell for days, became very deep, and formed a crust that would hold a man. The bison had not yet gone south; they were terrified and confused in the blizzard, and like lost sheep they milled around in the driving whiteness until many dropped in their tracks, were frozen or trampled. The snow lasted so long that all food was covered and the bison starved. The deep snow that tortured the men at Valley Forge that year covered the tragedy of the Illinois bison.

Spring came, the prairie was green again. A few scrawny bison with hollow sides were seen going westward near Peoria and Galena, and elsewhere in the state. It was said that as they approached the carcasses of those that had perished during that hard winter, and which lay in great numbers on the prairie, they stopped, pawed the ground, and bellowed, so the story goes, and then started off again to the west. In 1780 they were swimming the Illinois river in large groups, all heading west, and many crossed the Mississippi at Quincy. The bison in Illinois had heard the sentence of death. The Winter of the Deep Snow had done an irreparable damage, and white men's guns were finishing what the elements began. The last bison in Illinois is believed to have been shot by one Samuel Aimes in 1837 near the town of Troy Grove.

A restoration of bison in their more abundant days along the Sangamon is shown in the main hall of the Museum.



TIMBER WOLF

(*Canis nubilus*)

It was a cold night with brilliant stars in a black sky, and at the edge of the forest the wolves were howling. It was an eerie, frightening sound, a long smooth lullooooo—and then, abruptly, it changed. The voices broke into a dog-like barking—bark and howl, bark and howl—and off they went on their swift feet into the glistening winter darkness. The man in the doorway of an Illinois prairie cabin thankfully heard them go. They were on the scent of game, wild game probably, and, as the voices faded into the distance, he knew that for a little while longer his sheep were safe.

But in those days the wolves came back again and again, day and night, as long as the smell of sheep was about. For a long time wolves did not bother pioneer livestock. But once wolves were driven by hunger to strike down a baa-ing old ewe and knew the taste of mutton, the sheep-raisers of Illinois became desperate over the situation. In January, 1871, a newspaper in the region of Roodhouse and White Hall announced that wolves were about in such large numbers that they must be exterminated or sheep raising must be abandoned.

It has been a long time since there were wolves in Illinois, though now and again reports are received of timber wolves sighted and shot, especially near the Mississippi. The lean, grey, dog-like animals with their speedy legs which could outrun most dogs, finally were ousted from the neighborhood of sheep farmers and pig raisers. The few remaining wolves, the smaller cousins called coyotes, live in the wildest portions of Illinois until they, too, are taken for the bounty which is on their heads and the wildness which they represent.



BLACK BEARS IN ILLINOIS

(*Euarctos americanus*)

A scant hundred years ago there were bears in Illinois, as many a valiant pioneer woman could tell. It was often she who heard a noise in the smoke house where the winter's precious hams were curing, and, looking out, saw a bear. It was she, many a time alone in the prairie cabin, who took down the family's Kentucky rifle from the mantel shelf and fired it point blank at the intruder, and later proudly recounted the whole story to grandchildren who lolled on a bear-skin rug.

Bears seldom were a menace in winter. By the time the leaves had fallen and food was scarce, bears had eaten so much that, in addition to their four-inch layer of fur, they had a correspondingly thick layer of fat on which their sleeping bodies could subsist all winter. Hibernation saved wear-and-tear on a hungry body, prevented the craving for food, and provided for existence through weather in which many another animal went hungry.

The females holed in early, for the tiny young were born in mid-winter in the hibernation den. Males often came out in mild weather. Almost any kind of food would do when at last they emerged in spring, for a bear likes nearly everything—green grass, wild berries, tasty roots, wild honey, and ants, frogs, fish, and carrion, and, when it can catch them, small animals and birds.

The life group in the Museum shows a family of black bears as they once lived in Illinois. In the wild, forested area known today as Starved Rock, a mother bear and two cubs one October day found a patch of red partridge berries on the canyon floor. At that moment a large male black bear rounded a curve of rock and confronted the family. Since male bears seldom associate with their families, very likely the female turned and snarled at the newcomer, who, disliking a fuss, ambled off.



"VARMINTS IN THE TIMBER"

(Mountain Lion—Felis cougar)

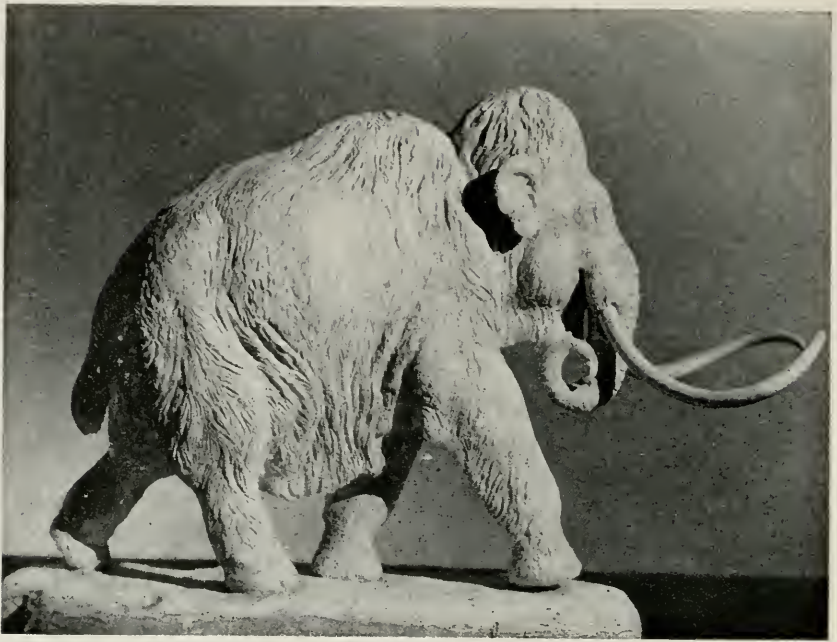
A long, lean, tawny cat had sneaked into the barnyard at dusk and picked up a young shoat that let out a terrified squeal. The cat bit deeper and the pig was quiet.

"That varmint's at the pigs again!" The farmer in the kitchen leaped for his gun. The light from the open door fell across the barnyard and in its path the great tan cat paused for a moment, its eyes burning. The farmer fired and the cat leaped lightly into the air and vanished in the darkness. The shoat was gone, too, and the farmer, raging, went indoors again.

The pioneer farmer knew the cat as cougar, panther, painter, catamount, cat o'mountain, or varmint, knew it as a big sneak-cat that sometimes crept on its belly into sheep pens and farm yards. Yet it did not spend much time around man and his possessions; it preferred a rabbit or a grouse or a woodchuck to lambs and shoats. It was a stealthy beast, persistent to the point of mania when it had its mind set on a meal. It would creep into impossible places and wait for its prey. The cougar was a big tom-cat with a blood-lust, and it was the terror of the forest. Only occasionally in the countryside did it acquire a taste for the farmer's stock.

There have been no cougars for many years in Illinois. In the west they still survive, but in the rocky bluffs along the Illinois there are no more yellow-tan cats that hurl a blood-curdling scream against the echoing rocks. There are no more varmints in the timber. And yet, now and then, there are huge cat tracks in the mud . . . sometimes there are unidentified screams in wild country at night. Varmints?

The Museum's life-group depicts a family of cougars at play in one of the canyons at Starved Rock State Park.



THE STORY OF THE MUSEUM'S MAMMOTH

The mammoth (*Mammonteus*) went the way of its ancestors ten to twenty thousand years ago, and it is believed that earliest men in Illinois knew the mammoth well, may actually have hastened it into oblivion.

Some 20,000 years ago when the retreating glacier released a torrent of melting snow and ice that swelled the rivers to great size, a mammoth lost its footing on a shelving bank and plunged into the flood somewhere along the Ohio or the Wabash. It drowned—it probably hadn't a chance—and the rushing water moved the ponderous bulk and gradually took it downstream, tumbling and dragging, the flesh wearing away as the fishes dined. By and by what was left of the mammoth lodged against a gravel bar jutting into the river and here the giant's bones came to rest.

Ages passed. An Illinois village grew up on the river banks but no one in Golconda suspected that a giant elephant thousands of years old lay buried at the town's very doorstep. And then, one day gravel excavators found a huge tusk of real ivory and sent a hurry-call to Dr. A. R. Crook at the Illinois State Museum. The people of the town were excited. No one seemed to know whether this was a creature left over from Noah's Deluge or an elephant which, as some hastily recalled, had been lost overboard from a circus boat.

Today in the Geology Room of the Museum there are the skull, tusk, and bones of this elephant of ancient times, and a reconstructed model of its body to show how the Illinois mammoth looked long ago.

ILLINOIS MAMMALS ARE PROTECTED BY LAW

The Game Code of Illinois, enacted in 1941 as amended in 1947 and in 1949 protects game and fur-bearing mammals, as well as song and game birds*. The Game Code is administered by the State Department of Conservation. Senate Bill No. 480 provides:

"Section 21. PROTECTED SPECIES—DEFINITIONS.] This Act shall apply . . . to wild animals and parts thereof, which shall include their green hides, in the State of Illinois, or which may be brought into the State of Illinois, which are hereby defined as follows:

. . . GAME ANIMALS—Cottontail rabbit, *Sylvilagus floridanus*; Swamp rabbit, *Sylvilagus aquaticus*; Jack rabbit, *Lepus townsendii*; Fox squirrel, *Sciurus niger*; Gray or cat squirrel, *Sciurus carolinensis*; White-tail deer, *Odocoileus* [*Odocoileus*] *virginianus*. FUR-BEARING ANIMALS—Opossum, *Didelphia virginiana*; Raccoon, *Procyon Lotor*; Mink, *Mustela vison*; Otter, *Lutra canadensis*; Skunk, *Mephitis mephitis*; Muskrat, *Ondatra zibethica*; Beaver, *Castor canadensis*; Red fox, *Vulpes fulva*; Badger, *Taxidea taxus*.

"It is unlawful to take any said . . . wild animals and parts thereof, including their green hides, with such devices,** during the protected seasons and in such manner, as defined in this Act."

By law there is no open season for taking beaver, badger or otter at any time, and no open season is provided for the whitetail deer, none of which can be killed legally.

For open seasons on game and fur-bearing mammals, see "Game and Fish Codes of Illinois", Department of Conservation, Springfield, Illinois.

For laws on song and game birds, see "Invitation to Birds", Illinois State Museum, page 63.

* The laws protecting Illinois Mammals are found in Senate Bill No. 575 approved July 16, 1941, Laws of Illinois, 1941, Vol. I, pp. 767-797, amended by Senate Bill No. 373, approved July 21, 1947, Laws of Illinois, 1947, pp. 1039-1057 and further amended by Senate Bill No. 480, approved August 3, 1949, Laws of Illinois, 1949, pp. 969-983; or Revised Statutes, 1949, Volume I, pp. 2030-2048.

** Section 46—Mechanical devices—Illegal methods: snare or snare-like device, any mechanical device, smoke or other gases, ferret or other animal used in similar manner, spear or any like device, poisons, chemicals, explosives, to set fire, spring trap with jaw spread larger than six inches, lights of vehicle, shotgun larger than ten guage, shotgun capable of firing more than three consecutive shots, silencer or other device to muffle or mute sound, device for tree climbing.



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